

# results of BLAST

#### BLASTN 2.2.9 [May-01-2004]

#### Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1094571710-29413-20494402687.BLASTQ4

Query=

(30 letters)

Database: All GenBank+EMBL+DDBJ+PDB sequences (but no EST, STS, GSS, environmental samples or phase 0, 1 or 2 HTGS sequences) 2,584,441 sequences; 11,696,079,666 total letters

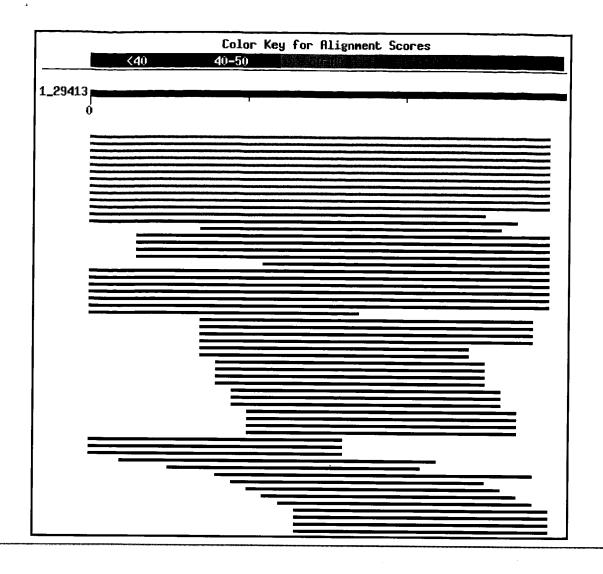
If you have any problems or questions with the results of this search please refer to the  ${\tt BLAST\ FAQs}$ 

Taxonomy reports

# **Distribution of 68 Blast Hits on the Query Sequence**

Mouse-over to show defline and scores. Click to show alignments

 $h \hspace{1.5cm} cb \hspace{1.5cm} h\,g \hspace{1.5cm} b \hspace{1.5cm} cg$ 



Sequences producing significant alignments:	Score (bits)	E Value	
gi 6226959 ref NM_000014.3  Homo sapiens alpha-2-macroglobu	60	1e-07	LUG
gi 25303945 gb BC040071.1  Homo sapiens alpha-2-macroglobul	_60	1e-07	LUG
gi 34367784 emb BX648622.1 HSM808773 Homo sapiens mRNA; cDN	<u>60</u>	1e-07	U
<u>gi 34366357 emb BX647329.1 HSM807473</u> Homo sapiens mRNA; cDN <u>gi 51476395 emb CR749334.1 </u> Homo sapiens mRNA; cDNA DKFZp77	<u>60</u>	1e-07 1e-07	U
gi 46812314 gb AY591530.1  Homo sapiens alpha 2 macroglobul	_60	1e-07	
gi 50503702 emb CR622895.1  full-length cDNA clone CS0DE003	60	1e-07	U
<u>qi 50502420 emb CR621613.1 </u> full-length cDNA clone CS0DI030 <u>qi 4726097 gb AC007436.1 </u> Homo sapiens 12 BAC RP11-43619 (R	60 60	1e-07 1e-07	U
gi 177871 gb M36501.1 HUMA2MGL Human alpha-2-macroglobulin	60	1e-07	LUG
gi 177869 gb M11313.1 HUMA2M Human alpha-2-macroglobulin mR	60	1e-07	LUG
$\begin{array}{lll} \underline{\text{gi} 45708660 \text{gb} \text{BC026246.1} } & \text{Homo sapiens alpha-2-macroglobul} \\ \underline{\text{gi} 1805591 \text{dbj} \text{D84338.1} \text{GPIAMA} } & \text{Cavia porcellus mRNA for alp} \\ \underline{\text{gi} 29569301 \text{gb} \text{AC127329.3} } & \text{Mus musculus BAC clone RP23-260A} \\ \end{array}$	52 48 40	3e-05 4e-04 0.11	
gi 4506354 ref NM       002864.1        Homo sapiens pregnancy-zone pro         gi 28436287 gb AC139365.3        Homo sapiens chromosome 8, clone         gi 6139075 gb AC010175.4        Homo sapiens 12 BAC RP11-118B22 (	38 38 38	0.42 0.42 0.42	LUG

14050044			
gi 35824 emb X54380.1 HSPZHEP Human mRNA for pregnancy zone	_38	0.42	LUG
gi 190793 gb M24416.1 HUMPZP Human pregnancy zone protein g gi 33438673 gb AC119848.8  Mus musculus chromosome 7, clone	_38	0.42	
gi 33438673 gb AC119848.8  Mus musculus chromosome 7, clone gi 31072075 gb AC101797.5  Mus musculus chromosome 1, clone	<u>36</u> 36	1.7	
gi 34419744 gb AC146125.2  Pan troglodytes BAC clone RP43-4	36	1.7 1.7	
gi 31126641 gb AC144532.4  Homo sapiens 12 BAC RP11-613J12	36	1.7	
gi 31342256 ref NM 175628.2  Mus musculus alpha-2-macroglob	36	1.7	
gi 6978424 ref NM_012488.1  Rattus norvegicus alpha-2-macro	36	1.7	LUG
gi 50582665 gb AC150558.1  Drosophila melanogaster clone BA	36	1.7	
gi 23958594 gb BC023844.1  Mus musculus alpha-2-macroglobul	36	1.7	L U G
gi 49119025 gb BC072642.1  Mus musculus alpha-2-macroglobul	<u> 36</u>	1.7	LU
<u>gi 21692610 emb Z99758.8 HS800F24</u> Human DNA sequence from c <u>gi 28394386 gb AC026131.4 </u> Homo sapiens chromosome 11, clon	<u>36</u>	1.7	
•	<u> 36</u>	1.7	The res
gi 27966960 gb AY185125.1  Mus musculus alpha-2-macroglobul	<u>36</u>	1.7	
gi 7287756 gb AE003415.1 DROSADH09 Drosophila melanogaster, gi 30230917 emb BX322613.6  Human DNA sequence from clone R	36	1.7	L
gi 30230917 emb BX322613.6  Human DNA sequence from clone R gi 28446007 emb AL713960.17  Mouse DNA sequence from clone	<u>36</u> <u>36</u>	1.7	
gi 14595763 gb AC092398.1 AC092398 Drosophila melanogaster,		1.7	L
gi 46358478 gb AC148696.1  Macaca mulatta Major Histocompat	<u>36</u> 36	1.7 1.7	L.
gi 22946597 gb AE003650.2  Drosophila melanogaster chromoso	36	1.7	
gi 24366624 emb AL845156.5  Mouse DNA sequence from clone R	36	1.7	
gi 21213470 emb AL672143.12  Mouse DNA sequence from clone	36	1.7	
gi 21537461 emb AL645727.16  Mouse DNA sequence from clone	<u>36</u>	1.7	
gi 5001540 gb AC004961.2 AC004961 Homo sapiens PAC clone RP gi 40018813 gb AC147052.2  Pan troglodytes BAC clone RP43-1	36	1.7	
gi 202591 gb J02635.1 RATA2M Rat liver alpha-2-macroglobuli	<u>36</u>	1.7	LU
gi 34482106 gb AC125396.4  Mus musculus BAC clone RP24-69M4	<u>36</u> 34	1.7 6.5	
gi 33342431 gb AC124748.5  Mus musculus BAC clone RP23-261I	34	6.5	
gi 22748539 gb AC122411.4  Mus musculus BAC clone RP24-143P	34	6.5	
gi 10047940 gb AC011290.3  Homo sapiens BAC clone RP11-64I2	34	6.5	
gi 18450195 gb AC099342.5        Homo sapiens BAC clone RP11-323F         gi 28209630 gb AC012540.12        Mus musculus chromosome 7, clon	$\frac{34}{34}$	6.5 6.5	
gi 42592648 emb BX530091.6  Zebrafish DNA sequence from clo	34	6.5	
gi 51705424 ref XM_357140.2  PREDICTED: Mus musculus simila	34	6.5	
gi 10716656 gb AC008177.3  Homo sapiens BAC clone RP11-527A	34	6.5	:
gi 49170304 gb AC147992.3  Mus musculus BAC clone RP24-384K	34	6.5	
gi 40736936 dbj AP006724.1  Homo sapiens genomic DNA, chrom	34	6.5	
<u>gi 19033380 qb AC022337.24 </u> Homo sapiens 3 BAC RP11-8703 (R <u>gi 17998627 qb AC095040.3 </u> Homo sapiens BAC clone RP11-18M1	<u>34</u> 34	6.5 6.5	
gi 9581603 emb AL163541.13  Human DNA sequence from clone R	34	6.5	
gi 2677628 emb Z82206.1 HS370M22 Human DNA sequence from cl	34	6.5	LG
gi 4827318 gb AC006034.2 AC006034 Homo sapiens BAC clone RP	34	6.5	*
gi 6002298 emb AL031768.9 HS136Bl Human DNA sequence from c	34	6.5	
gi 28268663 emb AL732614.15  Mouse DNA sequence from clone	_34	6.5	_
gi 32526885 ref NR 001461.1  Mus musculus KCNQ1 overlapping	34	6.5	L
<u>gi 42739980 gb AE017280.1 </u> Bacillus cereus ATCC 10987, sect <u>gi 21261919 emb AL713853.6 </u> Mouse DNA sequence from clone R	34	6.5	
· · · · · · · · · · · · · · · · · · ·	34	6.5	
<u>qi 11342587 emb AJ271885.2 MMU271885</u> Mus musculus partial K <u>qi 15142000 emb AL139374.18 </u> Human DNA sequence from clone	<u>34</u> 34	6.5 6.5	L
gi 8777501 dbj AP001295.1  Mus musculus genomic DNA, chromo			
gi 40353936 gb AC113977.16  Mus musculus chromosome 1, clon	<u>34</u> 34	6.5 6.5	

#### Alignments

```
>gi|6226959|ref|NM 000014.3| LUG Homo sapiens alpha-2-macroglobulin (A2M), mRNA
                         Length = 4577
   Score = 60.0 bits (30), Expect = 1e-07
   Identities = 30/30 (100%)
   Strand = Plus / Plus
Query: 1
                              ttcattcccctgaagccaacagtgaaaatg 30
                              Sbjct: 4208 ttcattcccctgaagccaacagtgaaaatg 4237
>gi|25303945|gb|BC040071.1| LUG Homo sapiens alpha-2-macroglobulin, mRNA (cDNA c
                             IMAGE:6056126), complete cds
                        Length = 4617
   Score = 60.0 bits (30), Expect = 1e-07
   Identities = 30/30 (100%)
   Strand = Plus / Plus
Query: 1
                             ttcattcccctgaagccaacagtgaaaatg 30
                             Sbjct: 4217 ttcattcccctgaagccaacagtgaaaatg 4246
Length = 4052
  Score = 60.0 bits (30), Expect = 1e-07
  Identities = 30/30 (100%)
  Strand = Plus / Plus
Query: 1
                             ttcattcccctgaagccaacagtgaaaatg 30
                             4 | | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | |
Sbjct: 3662 ttcattcccctgaagccaacagtgaaaatg 3691
Length = 2369
  Score = 60.0 \text{ bits } (30), Expect = 1e-07
  Identities = 30/30 (100%)
  Strand = Plus / Plus
                            ttcattcccctgaagccaacagtgaaaatg 30
                             Sbjct: 1955 ttcattcccctgaagccaacagtgaaaatg 1984
```

>gi|51476395|emb|CR749334.1| Homo sapiens mRNA; cDNA DKFZp779B086 (from clone DKFZ

```
Length \approx 4705
 Score = 60.0 \text{ bits } (30), Expect = 1e-07
 Identities = 30/30 (100%)
 Strand = Plus / Plus
           ttcattcccctgaagccaacagtgaaaatg 30
           Sbjct: 4236 ttcattcccctgaagccaacagtgaaaatg 4265
                           LU Homo sapiens alpha 2 macroglobulin (A2M) mRNA, com
>gi|46812314|gb|AY591530.1|
         Length = 4596
 Score = 60.0 bits (30), Expect = 1e-07
 Identities = 30/30 (100%)
 Strand = Plus / Plus
Query: 1
           ttcattcccctgaagccaacagtgaaaatg 30
           Sbjct: 4243 ttcattcccctgaagccaacagtgaaaatg 4272
>qi|50503702|emb|CR622895.1| U full-length cDNA clone CS0DE003YJ12 of Placenta of
           (human)
         Length = 1457
 Score = 60.0 \text{ bits } (30), Expect = 1e-07
 Identities = 30/30 (100%)
Strand = Plus / Plus
Query: 1
           ttcattcccctgaagccaacagtgaaaatg 30
           Sbjct: 1102 ttcattcccctgaagccaacagtgaaaatg 1131
>gi|50502420|emb|CR621613.1| U full-length cDNA clone CS0DI030YB20 of Placenta Cot
           Homo sapiens (human)
         Length = 1656
Score = 60.0 \text{ bits } (30), Expect = 1e-07
Identities = 30/30 (100%)
```

>gi|4726097|gb|AC007436.1| D Homo sapiens 12 BAC RP11-436I9 (Roswell Park Cancer I Library) complete sequence

 $h \hspace{1cm} cb \hspace{1cm} h \hspace{1cm} g \hspace{1cm} b \hspace{1cm} cg$ 

ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 1324 ttcattcccctgaagccaacagtgaaaatg 1353

Strand = Plus / Plus

Query: 1

```
Length = 163881
```

Score = 60.0 bits (30), Expect = 1e-07
Identities = 30/30 (100%)
Strand = Plus / Plus

Query: 1 ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 76397 ttcattcccctgaagccaacagtgaaaatg 76426

>gi|177871|gb|M36501.1|HUMA2MGL LUG Human alpha-2-macroglobulin mRNA, 3' end Length = 2041

Score = 60.0 bits (30), Expect = 1e-07
Identities = 30/30 (100%)
Strand = Plus / Plus

Query: 1 ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 1672 ttcattccctgaagccaacagtgaaaatg 1701

>gi|177869|gb|M11313.1|HUMA2M LUG Human alpha-2-macroglobulin mRNA, complete cds Length = 4577

Score = 60.0 bits (30), Expect = 1e-07
Identities = 30/30 (100%)
Strand = Plus / Plus

Query: 1 ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 4208 ttcattcccctgaagccaacagtgaaaatg 4237

Score = 52.0 bits (26), Expect = 3e-05
Identities = 26/26 (100%)
Strand = Plus / Plus

Query: 1 ttcattcccctgaagccaacagtgaa 26

Sbjct: 1906 ttcattcccctgaagccaacagtgaa 1931

>gi|1805591|dbj|D84338.1|GPIAMA Cavia porcellus mRNA for alpha-macroglobulin, comp Length = 4545

h

cb

h g b

cg

```
Score = 48.1 bits (24), Expect = 4e-04
 Identities = 27/28 (96%)
 Strand = Plus / Plus
Query: 1
          ttcattcccctgaagccaacagtgaaaa 28
          Sbjct: 4186 ttcatcccctgaagccaacagtgaaaa 4213
Length = 183639
 Score = 40.1 bits (20), Expect = 0.11
 Identities = 20/20 (100%)
 Strand = Plus / Plus
Query: 8
           ccctgaagccaacagtgaaa 27
           Sbjct: 29658 ccctgaagccaacagtgaaa 29677
>gi|4506354|ref|NM 002864.1| LUG Homo sapiens pregnancy-zone protein (PZP), mRNA
        Length = 4615
Score = 38.2 bits (19), Expect = 0.42
 Identities = 25/27 (92%)
Strand = Plus / Plus
Query: 4
          attcccctgaagccaacagtgaaaatg 30
          Sbjct: 4215 attcccctgaaaccaacagtaaaaatg 4241
>gi|28436287|gb|AC139365.3| D Homo sapiens chromosome 8, clone RP11-643N23, comple
        Length = 185549
Score = 38.2 bits (19), Expect = 0.42
Identities = 19/19 (100%)
Strand = Plus / Plus
Query: 12
           gaagccaacagtgaaaatg 30
           Sbjct: 36000 gaagccaacagtgaaaatg 36018
>gi|6139075|gb|AC010175.4| D Homo sapiens 12 BAC RP11-118B22 (Roswell Park Cancer
          BAC Library) complete sequence
        Length = 127277
Score = 38.2 \text{ bits (19)}, Expect = 0.42
Identities = 25/27 (92%)
```

Strand = Plus / Minus Query: 4 attcccctgaagccaacagtgaaaatg 30 11111111111 Sbjct: 5465 attcccctgaaaccaacagtaaaaatg 5439 >gi|35824|emb|X54380.1|HSPZHEP LUG Human mRNA for pregnancy zone protein Length = 4615Score = 38.2 bits (19), Expect = 0.42Identities = 25/27 (92%) Strand = Plus / Plus Query: 4 attcccctgaagccaacagtgaaaatg 30 Sbjct: 4215 attcccctgaaaccaacagtaaaaatg 4241 >gi|190793|gb|M24416.1|HUMPZP L Human pregnancy zone protein gene, partial cds Length = 2788Score = 38.2 bits (19), Expect = 0.42Identities  $\approx 25/27 (92\%)$ Strand = Plus / Plus attcccctgaagccaacagtgaaaatg 30 Sbjct: 1217 attcccctgaaaccaacagtaaaaatg 1243 >gi|33438673|gb|AC119848.8| D Mus musculus chromosome 7, clone RP23-73B20, complet Length = 239297Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%) Strand = Plus / Minus Query: 10 ctgaagccaacagtgaaa 27 111111111111111111 Sbjct: 24987 ctgaagccaacagtgaaa 24970 Length = 169292Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%)

h cb hg b cg

Strand = Plus / Minus

h

cb

hg b

cg

```
Query: 10
            ctgaagccaacagtgaaa 27
            Sbjct: 20284 ctgaagccaacagtgaaa 20267
>gi|34419744|gb|AC146125.2|  Pan troglodytes BAC clone RP43-4K13 from 7, complete
         Length = 172424
 Score = 36.2 bits (18), Expect = 1.7
 Identities = 18/18 (100%)
 Strand = Plus / Plus
Query: 9
            cctgaagccaacagtgaa 26
            11111111111111111
Sbjct: 76254 cctgaagccaacagtgaa 76271
>gi|31126641|gb|AC144532.4| D Homo sapiens 12 BAC RP11-613J12 (Roswell Park Cancer
            Library) complete sequence
         Length = 131101
 Score = 36.2 bits (18), Expect = 1.7
 Identities = 18/18 (100%)
 Strand = Plus / Minus
Query: 11
             tgaagccaacagtgaaaa 28
             Sbjct: 116557 tgaagccaacagtgaaaa 116540
                            LU Mus musculus alpha-2-macroglobulin (A2m), mRNA
>gi|31342256|ref|NM 175628.2|
         Length = 4622
 Score = 36.2 \text{ bits (18)}, Expect = 1.7
 Identities = 27/30 (90%)
 Strand = Plus / Plus
           ttcattcccctgaagccaacagtgaaaatg 30
           Sbjct: 4227 ttcatccccttgaaaccaacagtgaaaatg 4256
>gi|6978424|ref|NM 012488.1| LUG Rattus norvegicus alpha-2-macroglobulin (A2m),
         Length = 4595
Score = 36.2 bits (18), Expect = 1.7
Identities = 27/30 (90%)
Strand = Plus / Plus
Query: 1
           ttcattcccctgaagccaacagtgaaaatg 30
```

```
Sbjct: 4222 ttcatccccttgaaaccaacagtgaaaatg 4251
                         D Drosophila melanogaster clone BACR01N08, complete se
>gi|50582665|gb|AC150558.1|
         Length = 174139
 Score = 36.2 \text{ bits (18)}, Expect = 1.7
 Identities = 21/22 (95%)
 Strand = Plus / Minus
Query: 8
           ccctgaagccaacagtgaaaat 29
           Sbjct: 52725 ccctgaacccaacagtgaaaat 52704
>gi|23958594|qb|BC023844.1| LUG Mus musculus alpha-2-macroglobulin, mRNA (cDNA c
          partial cds
         Length = 3392
 Score = 36.2 \text{ bits (18)}, Expect = 1.7
 Identities = 27/30 (90%)
 Strand = Plus / Plus
Query: 1
          ttcattcccctgaagccaacagtgaaaatg 30
          Sbjct: 2943 ttcatccccttgaaaccaacagtgaaaatg 2972
>gi|49119025|gb|BC072642.1| LU Mus musculus alpha-2-macroglobulin, mRNA (cDNA clo
          IMAGE: 6839761), complete cds
         Length = 4615
 Score = 36.2 bits (18), Expect = 1.7
 Identities = 27/30 (90%)
 Strand = Plus / Plus
Query: 1
          ttcattcccctgaagccaacagtgaaaatg 30
          Sbjct: 4221 ttcatccccttgaaaccaacagtgaaaatg 4250
sequence
        Length = 140788
Score = 36.2 \text{ bits (18)}, Expect = 1.7
Identities = 18/18 (100%)
Strand = Plus / Minus
Query: 9
           cctgaagccaacagtgaa 26
```

h cb hg b cg

```
Sbjct: 79442 cctgaagccaacagtgaa 79425
```

Score = 36.2 bits (18), Expect = 1.7
Identities = 18/18 (100%)
Strand = Plus / Plus

Query: 11 tgaagccaacagtgaaaa 28

Sbjct: 3885 tgaagccaacagtgaaaa 3902

>gi|27966960|gb|AY185125.1| LU Mus musculus alpha-2-macroglobulin-P (A2mp) mRNA, Length = 4622

Score = 36.2 bits (18), Expect = 1.7
Identities = 27/30 (90%)
Strand = Plus / Plus

Query: 1 ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 4227 ttcatccccttgaaaccaacagtgaaaatg 4256

>gi|7287756|gb|AE003415.1|DROSADH09 LD Drosophila melanogaster, chromosome 2L, re section 9 of 10 of the complete sequence Length = 299935

Score = 36.2 bits (18), Expect = 1.7
Identities = 21/22 (95%)
Strand = Plus / Minus

Query: 8 ccctgaagccaacagtgaaaat 29

Sbjct: 298336 ccctgaacccaacagtgaaaat 298315

Score = 36.2 bits (18), Expect = 1.7
Identities = 18/18 (100%)
Strand = Plus / Minus

Query: 11 tgaagccaacagtgaaaa 28

Sbjct: 139792 tgaagccaacagtgaaaa 139775

h

cb

hg b

cg

```
sequence
         Length = 203449
 Score = 36.2 \text{ bits (18)}, Expect = 1.7
 Identities = 18/18 (100%)
 Strand = Plus / Minus
Query: 11
            tgaagccaacagtgaaaa 28
             Sbjct: 158062 tgaagccaacagtgaaaa 158045
>gi|14595763|qb|AC092398.1|AC092398 LD Drosophila melanogaster, chromosome 2L, re
            BACR03G19, complete sequence
         Length = 165839
 Score = 36.2 bits (18), Expect = 1.7
 Identities = 21/22 (95%)
 Strand = Plus / Minus
Query: 8
           ccctgaagccaacagtgaaaat 29
            Sbjct: 52725 ccctgaacccaacagtgaaaat 52704
>gi|46358478|gb|AC148696.1| D Macaca mulatta Major Histocompatibility Complex BAC
            sequence
         Length = 165811
 Score = 36.2 bits (18), Expect = 1.7
 Identities = 18/18 (100%)
 Strand = Plus / Minus
Query: 8
           ccctgaagccaacagtga 25
            11111111111111111111
Sbjct: 38804 ccctgaagccaacagtga 38787
>gi|22946597|gb|AE003650.2| LD Drosophila melanogaster chromosome 2L, section 59
            sequence
        Length = 273414
Score = 36.2 \text{ bits } (18), \text{ Expect} = 1.7
 Identities = 21/22 (95%)
Strand = Plus / Minus
Query: 8
            ccctgaagccaacagtgaaaat 29
```

Sbjct: 252919 ccctgaacccaacagtgaaaat 252898 sequence Length = 118716Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%) Strand = Plus / Plus Query: 1 ttcattcccctgaagcca 18 Sbjct: 26101 ttcattcccctgaagcca 26118 sequence Length = 170167Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%) Strand = Plus / Minus Query: 8 ccctgaagccaacagtga 25 Sbjct: 78510 ccctgaagccaacagtga 78493 ■ Mouse DNA sequence from clone RP23-20G7 on chromos >gi|21537461|emb|AL645727.16| sequence Length = 218427Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%) Strand = Plus / Plus Query: 10 ctgaagccaacagtgaaa 27 Sbjct: 43836 ctgaagccaacagtgaaa 43853 Length = 68130Score = 36.2 bits (18), Expect = 1.7Identities = 18/18 (100%) Strand = Plus / Minus

h cb hg b cg

cctgaagccaacagtgaa 26

Query: 9

```
Sbjct: 38352 cctgaagccaacagtgaa 38335
```

```
Score = 36.2 bits (18), Expect = 1.7
Identities = 18/18 (100%)
Strand = Plus / Plus
```

Query: 9 cctgaagccaacagtgaa 26

Sbjct: 116589 cctgaagccaacagtgaa 116606

#### >gi|202591|qb|J02635.1|RATA2M LU Rat liver alpha-2-macroglobulin mRNA, complete c Length = 4595

```
Score = 36.2 bits (18), Expect = 1.7
Identities = 27/30 (90%)
Strand = Plus / Plus
```

Query: 1 ttcattcccctgaagccaacagtgaaaatg 30

Sbjct: 4222 ttcatccccttgaaaccaacagtgaaaatg 4251

#### 

```
Score = 34.2 bits (17), Expect = 6.5
Identities = 17/17 (100%)
Strand = Plus / Minus
```

Query: 14 agccaacagtgaaaatg 30

Sbjct: 27808 agccaacagtgaaaatg 27792

### 

Score = 34.2 bits (17), Expect = 6.5
Identities = 20/21 (95%)
Strand = Plus / Plus

Query: 3 cattcccctgaagccaacagt 23

Sbjct: 16942 cattcccatgaagccaacagt 16962

```
Mus musculus BAC clone RP24-143P19 from chromosome 1
>qi|22748539|qb|AC122411.4|
        Length = 182658
Score = 34.2 \text{ bits (17), Expect} = 6.5
Identities = 17/17 (100%)
Strand = Plus / Minus
           agccaacagtgaaaatg 30
Query: 14
           Sbjct: 15416 agccaacagtgaaaatg 15400
>gi|10047940|gb|AC011290.3| D Homo sapiens BAC clone RP11-64I2 from 7, complete se
        Length = 117764
 Score = 34.2 bits (17), Expect = 6.5
 Identities = 17/17 (100%)
 Strand = Plus / Plus
           gaagccaacagtgaaaa 28
Query: 12
           Sbjct: 67979 gaagccaacagtgaaaa 67995
Length = 29752
 Score = 34.2 bits (17), Expect = 6.5
 Identities = 17/17 (100%)
 Strand = Plus / Plus
           ttcattcccctgaagcc 17
Query: 1
            111111111111111
Sbjct: 10302 ttcattcccctgaagcc 10318
                          D Mus musculus chromosome 7, clone RP23-101N20, compl
>gi|28209630|gb|AC012540.12|
         Length = 211091
 Score = 34.2 bits (17), Expect = 6.5
 Identities = 17/17 (100%)
 Strand = Plus / Minus
            agccaacagtgaaaatg 30
Ouery: 14
```

h cb hg b cg

Sbjct: 167816 agccaacagtgaaaatg 167800

```
complete sequence
Length = 180025
```

Score = 34.2 bits (17), Expect = 6.5Identities = 17/17 (100%) Strand = Plus / Minus

aagccaacagtgaaaat 29 Query: 13 1111111111111111

Sbjct: 113546 aagccaacagtgaaaat 113530

Lambda K 1.37 0.711 1.31

Gapped Н K Lambda

42 ---

1.31 0.711 1.37

Gap Penalties: Existence: 5, Extension: 2

Number of Sequences: 2584441 Number of Hits to DB: 681,709 Number of extensions: 34189

Number of successful extensions: 9654 Number of sequences better than 10.0: 15

Number of HSP's better than 10.0 without gapping: 15

Number of HSP's gapped: 9654

Number of HSP's successfully gapped: 15

Number of extra gapped extensions for HSPs above 10.0: 9629

Length of query: 30

Length of database: 11,696,079,666

Length adjustment: 19

Effective length of query: 11

Effective length of database: 11,646,975,287

Effective search space: 128116728157

Effective search space used: 128116728157

A: 0

h

X1: 11 (21.8 bits)

X2: 15 (30.0 bits)

X3: 25 (50.0 bits)

S1: 12 (25.0 bits)

S2: 17 (34.2 bits)